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We claim:

1. An RNA molecule of length between about 12 and about 36 nucleotides comprising at least one modified nucleotide, wherein the modified nucleotide is a 2'-deoxy-2'-fluoro nucleotide.

2. The RNA molecule of claim 1, wherein all pyrimidine nucleotides present in said RNA are 2'-deoxy-2'-fluoro pyrimidine nucleotides.

3. The RNA molecule of claim 1, wherein the modified nucleotides in said RNA include at least one 2'-deoxy-2'-fluoro cytidine or 2'-deoxy-2'-fluoro uridine nucleotide.

4. The RNA molecule of claim 1, wherein the modified nucleotides in said RNA include at least one 2'-fluoro cytidine and at least one 2'-deoxy-2'-fluoro uridine nucleotides.

5. The RNA molecule of claim 1, wherein all uridine nucleotides present in said RNA are 2'-deoxy-2'-fluoro uridine nucleotides.

6. The RNA molecule of claim 1, wherein all cytidine nucleotides present in said RNA are 2'-deoxy-2'-fluoro cytidine nucleotides.

7. The RNA molecule of claim 1, wherein all adenosine nucleotides present in said RNA are 2'-deoxy-2'-fluoro adenosine nucleotides.

8. The RNA molecule of claim 1, wherein all guanosine nucleotides present in said RNA are 2'-deoxy-2'-fluoro guanosine nucleotides.

9. The RNA of claim 1, further comprising at least one modified internucleotidic linkage.

10. The RNA of claim 9, wherein said internucleotidic linkage is a phosphorothioate linkage.

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11. The RNA molecule of claim 1, wherein one or more said 2'-deoxy-2'-fluoronucleotides are present at specifically selected locations in said RNA that are sensitive to cleavage by ribonucleases.

12. The RNA of claim 11, wherein said specifically selected locations that are sensitive to cleavage by ribonucleases comprise pyrimidine nucleotides.

13. The RNA molecule of claim 1, wherein said RNA is associated with one or more cellular proteins.

14. A method of increasing the stability of an RNA molecule against cleavage by ribonucleases, comprising introducing at least one modified nucleotide into said RNA, wherein said modified nucleotide is a 2'-deoxy-2'-fluoro nucleotide.

15. The method of claim 14, wherein all pyrimidine nucleotides present in said RNA are replaced by 2'-deoxy-2'-fluoro pyrimidine nucleotides.

16. The method of claim 14, wherein at least one of the pyrimidine nucleotide in said RNA is replaced with a 2'-deoxy-2'-fluoro nucleotide.

17. The method of claim 14, wherein all pyrimidine nucleotides present in said RNA are replaced with 2'-deoxy-2'-fluoro pyrimidine nucleotides.

18. The method of claim 14, wherein at least one of the cytidine nucleotides in said RNA is replaced with a 2'-fluoro cytidine nucleotide.

19. The method of claim 14, wherein at least one of the uridine nucleotides in said RNA is replaced with a 2'-fluoro uridine nucleotide.

20. The method of claim 14, wherein all uridine nucleotides present in said RNA are replaced with 2'-deoxy-2'-fluoro uridine nucleotides.

21. The method of claim 14, wherein all cytidine nucleotides present in said RNA are replaced with 2'-deoxy-2'-fluoro cytidine nucleotides.

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22. The method of claim 14, wherein all adenosine nucleotides present in said RNA are replaced with 2'-deoxy-2'-fluoro adenosine nucleotides.

23. The method of claim 14, wherein all guanosine nucleotides present in said RNA are replaced with 2'-deoxy-2'-fluoro guanosine nucleotides.

24. The RNA of claim 1 comprising nucleotide sequence that is complementary to nucleotide sequence in a separate RNA.

25. The RNA of claim 24, wherein said separate RNA is a viral RNA.

26. The RNA of claim 25, wherein said viral RNA is HIV RNA.